

Operations

JOINT AIRDROP INSPECTION RECORDS, MALFUNCTION INVESTIGATIONS, AND ACTIVITY REPORTING

This publication prescribes procedures to follow and identifies forms to use in preparing joint airdrop inspection records, airdrop malfunction investigations, and activity reports. It applies to all DOD components involved in the premeditated airdrop of personnel, supplies, and equipment. Any service involved in unilateral operations may supplement this publication; however, it must not supplement the airdrop malfunction and activity reporting requirements. If they issue supplements, a copy must be sent to the Commandant, US Army Quartermaster School, Attention: ATSM-ABN, Fort Lee VA 23801.

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Chapter 1

PUBLICATION OBJECTIVE, USE OF REPORTED DATA, EXEMPTION, EXPLANATION OF TERMS,
AND RESPONSIBILITIES

1-1. Publication Objective. The primary objective of this publication is to standardize joint inspection procedures, malfunction officer responsibilities and duties, malfunction investigation procedures, and activity reporting for all Department of Defense (DOD) components engaged in premeditated airdrop operations.

1-2. Use of Reported Data. The US Army Quartermaster School, Fort Lee, VA 23801, reviews, analyzes, and publishes reported airdrop malfunction and activity data in a Quarterly Airdrop Review and Malfunction Analysis.

1-3. Exemption to Reporting Requirements. Special operational units of the Department of the Navy are exempt from the reporting requirements of this publication.

1-4. Explanation of Terms. These terms are defined as they apply to this publication:

a. Aerial Port. Provides personnel and equipment for the transportation of airdrop loads to the aircraft according to AFR 76-7/AR 59-106/OPNAVINST 4660.1B/MCO 4660.1B. Provides qualified inspectors to perform before and after loading joint airdrop inspections (JAI) of rigged airdrop loads.

b. Airdrop Equipment. Special items of equipment such as parachutes, airdrop containers, platforms, slings, tie downs, and related air items to use for the airdrop of personnel, supplies, and equipment.

c. Air Item. Same as airdrop equipment.

d. Airdrop Malfunction. The failure of an airdrop item or component of an airdrop system to function as it was intended or designed.

(1) Partial Malfunction. The failure of an airdrop system to function properly to the point that the load or parachutist is subject to damage or injury from system inadequacy.

(2) Total Malfunction. The complete failure of the airdrop system to function as designed.

e. Airdrop System. A system designed to facilitate the premeditated airdrop of personnel, supplies, and equipment from an aircraft in flight. It consists of parachutes, airdrop containers, platforms, and related air items.

f. Airlift Unit. An airlift unit is organized, equipped, and trained to airdrop personnel, supplies, and equipment.

g. Investigations:

(1) Onsite Investigation. Performed by the malfunction officer to collect data used to determine the cause of the malfunction.

(2) Follow-On Investigation. Normally conducted by a board that has been appointed under the appropriate publication of the service involved.

h. Joint Airdrop Inspection (JAI). The inspection activity of two or more services working together. This inspection is conducted prior to aircraft loading. The inspectors must be certified according to paragraph 2-1.

(1) Aerial Port Inspector. An Air Force airdrop-qualified loadmaster (Air Force Specialty Code 114X0) provided by the supporting unit. He or she is assigned to an Air Force aerial port unit and designated to perform joint airdrop inspections on loads to be airdropped from Air Force aircraft (see paragraph 2-2 for exceptions).

(2) Rigger Inspector. The transported force representative. He or she can be a parachute rigger (Military Occupational Specialty 43E), air equipment repair technician (401A), or a parachute maintenance and aerial supply officer (92D).

i. Joint Operation or Airdrop. Airdrop activities that involve resources from more than one service.

j. Malfunction Officer. A qualified commissioned officer, warrant officer, or noncommissioned officer designated by the transported force commander to observe airdrop operations and investigate airdrop malfunctions. To be qualified, the individual must be familiar with aerial delivery equipment and rigging procedures. Normally, he or she is a trained parachute rigger.

k. Serious Injury. When a jumper is unconscious or when he or she is conscious and complains of torso, back, neck, or head injuries; mutilated limbs; compound fractures; or lacerations with excessive bleeding. Medical personnel should concur with this determination.

l. Technical/Rigger-Type Inspection. A complete and thorough inspection of an airdrop item that includes associated parts and components. This inspection is conducted according to TM 10-1670- 201-23/ TO 13C-1-41/NAVAIR 13-1-17.

m. Transported Force. The activity the airlift unit is moving.

n. Unilateral Operation or Airdrop. An airdrop that involves the resources of a single service.

1-5. Responsibilities:

a. Commanders. Responsible for properly executing and recording the joint airdrop inspection,

conducting malfunction investigations, and providing timely and accurate reporting of airdrop malfunctions and activities.

b. Airlift Unit. The airlift unit secures all airdrop loads and personnel in the aircraft, completes in-aircraft rigging, and accomplishes the extraction or release of personnel, supplies, and equipment from aircraft in flight.

c. Transported Force:

(1) Rigs, delivers, and assists with

airdrop cargo as AFR 76-6/AF59-106//OPNAVINST 4660.1B/MCO 4660.1B outlines.

(2) Appoints inspectors and safety, malfunction, and medical personnel as required to support the airdrop operation.

(3) Ensures that a malfunction officer is present on the drop zone (DZ) during all airborne operations. This malfunction officer maintains contact with the DZ control party and the Air Force Combat Control Team (CCT), if present.

Chapter 2

JOINT AIRDROP INSPECTIONS, PROCEDURES, AND RECORDS

2-1. Joint Airdrop Inspection. Personnel of the participating services perform the joint inspection of rigged airdrop loads. The US Army Quartermaster School, Fort Lee, Virginia, must certify these personnel. Certification requires the successful completion of the resident Airdrop Load Inspector Certification Course at Fort Lee or the course the Mobile Training Team from the Airborne Department at Fort Lee presents.

2-2. Inspection Procedures. Prior to airdrop, loads or containers rigged for airdrop will be given three separate inspections.

a. The first inspection is a final rigger inspection the Field Manual or Technical Order for that particular load requires. It is not necessary to use the DD Form 1748 series inspection forms for this inspection. When the load has been completely rigged, a certified transported force rigger inspector performs the final rigger inspection.

b. The next inspection is the before-loading inspection. A certified transported force rigger inspector and an aerial port inspector conduct it jointly. The inspectors use the proper joint airdrop inspection record and both sign the appropriate blocks to certify correct rigging of the load. When the rigged load or container is delivered to the aircraft, the aircraft loadmaster checks the the inspection form for completion and necessary signatures before he or she accepts or rejects the load.

c. After the aircraft loadmaster completes the loading and in- aircraft rigging, the after-loading inspection is completed. The aerial port inspector, a transported force rigger inspector, and the aircrew loadmaster conduct the inspection. After completion, the two inspectors certify, by signing the form, that the load is ready to airdrop. the aircraft loadmaster signs the form to verify its completion.

NOTE: When the Military Airlift Command (MAC) authorizes, an airdrop-qualified loadmaster (qualified on the specific type of aircraft and associated airdrop system) who is not assigned to the aircrew may perform the aircrew loadmaster's duties. EXCEPTIONS:

1. A jumpmaster, in lieu of an aerial port inspector, accomplishes inspections conducted on containers rigged for airdrop using the Ramp Bundle Airdrop System (WEDGE).
2. Door-loaded airdrop containers do not require inspection forms or the before- or

after-loading inspections; however, the transported force jumpmaster and the airlift unit aircraft loadmaster must inspect them.

3. The concerned riggers or test program personnel may inspect airdrop loads or containers generated by formal test agencies such as the US Army Yuma Proving Ground or US Army Airborne Board, Fort Bragg, North Carolina.

4. The US Air Force Liaison noncommissioned officer assigned to the Airborne Department, US Army Quartermaster School, Fort Lee, Virginia, may perform the inspections this publication requires without being assigned to an aerial port unit.

5. DD Forms 1748 and 1748-4, Joint Airdrop Inspection Records, do not outline or specify the proper inspection sequence for all loads peculiar to special operations. Inspectors must refer to the appropriate rigging manual for the proper inspection procedure. The findings will be recorded in the "Remarks Section" of the DD Form 1748 and the malfunctions reported as chapter 5 outlines.

d. The before- and after-loading inspections are completed to ensure compliance with appropriate rigging instructions, field manuals, technical orders, and this publication. The transported force furnishes an up-to-date copy of the appropriate field manual or technical order to the inspectors.

2-3. Inspection Records:

a. The joint airdrop inspection records listed below will be used as a checklist for joint airdrop inspections. The transported force provides these forms:

- (1) DD Form 1748, Joint Airdrop Inspection Record (Platforms). Complete one form (set of three copies) for each low-velocity platform load to be airdropped.
- (2) DD Form 1748-1 Joint Airdrop Inspection Record (LAPES). Complete one form (set of three copies) for each platform rigged for LAPES airdrop.
- (3) DD Form 1748-4, Joint Airdrop Inspection Record (Containers). Complete one form (set of three copies) for each load of containers rigged for airdrop. Use only one form per aircraft when multiple containers are to be airdropped.

b. These personnel must retain one copy of the DD Form 1748-4:

- (1) The transported force inspector's unit (first copy).
- (2) The aerial port inspector's unit (second copy).
- (3) An aircrew loadmaster from the aircraft that performs the airdrop (third copy).

2-4. Completing the Joint Airdrop Inspection Record. Completion instructions are printed on the reverse side of the forms.

2-5. Disposition Instructions. After completion of an airdrop, retain and dispose of the Joint Airdrop Inspection Record as follows:

a. If a malfunction occurs, retain the form for use during the investigation or

analysis. Make disposal as appropriate service directives authorize for investigative documents. A copy must accompany the DD Form 1748-2, Airdrop Malfunction Report (Personnel-Cargo) (see chapter 5).

b. If there is no malfunction, dispose of the form according to appropriate service directives.

Chapter 3

MALFUNCTION OFFICER RESPONSIBILITIES, ACTIONS, AND DUTIES

3-1. Priority of Malfunction

Investigations. The investigation of personnel parachute and equipment malfunctions should receive the highest priority secondary only to medical aid for the injured. It should supersede all other aspects of the operation, including ground tactical play. To promptly and accurately investigate and report could save lives and equipment. It will provide data to use to determine whether a system change is necessary to prevent future occurrences. The malfunction officer should enlist as many personnel as needed to watch for possible malfunctions. These personnel will direct the attention of the malfunction officer to any unusual occurrences, and he or she will take action as this publication specifies.

3-2. Responsibilities, Actions, and Duties:

a. The organization that provides the air items normally provides the malfunction officer. His or her duties are to:

- (1) Be present on the DZ or extraction zone (EZ) during all personnel and equipment drops.
- (2) Have the following minimum equipment in his or her possession during duty performance:
 - (a) A communication capability with the DZ control party.
 - (b) A good-quality camera to take photos of malfunctions or incidents. Photographic equipment is essential for the proper performance of malfunction officer duties. Pictures of malfunctions greatly assist in investigations. If necessary, cite this publication as the authority to requisition a camera for the unit malfunction officers.
 - (c) The forms and clerical supplies necessary to tag equipment and initiate reports.
 - (d) Binoculars or night vision devices.
 - (e) Transportation to move around the DZ.

(3) Perform these duties in the event of a malfunction:

- (a) Conduct an onsite investigation of the cause(s) of the malfunction according to this publication.
 - (b) Take photographs that show possible cause(s) of the malfunction.
 - (c) Secure, identify, tag, and number airdrop equipment involved in the malfunction incident.
 - (d) Prepare and submit required reports.
- b. In the event of partial malfunction, the malfunction officer counts the number and type of malfunctions and records them (see chapter 5). He or she attempts to get a statement(s) from the parachutist(s) with a minimum of name, unit, stick number, previous jump experience, type and identity of aircraft, and the details of the

malfunction. This investigative activity should interfere as little as possible with the post-jump activities planned by the tactical unit during mass tactical personnel jumps. If warranted, the malfunction officer carries out any subsequent investigations from this information.

c. The malfunction officer obtains statements from the parachutists and jumpmaster in the event of a total malfunction during personnel jumps where there were no injuries. He or she should gather additional statements from ground observers, other parachutists, and aircraft personnel if necessary to determine the cause. The statements do not have to be sworn, but the malfunction officer must secure any physical evidence obtained.

d. If serious injuries or death result from a parachute jump, the malfunction officer:

- (1) Places the impact site off limits and posts a guard so the site remains undisturbed to the maximum extent possible without interfering with medical support.
- (2) Photographs the parachutist, the impact site, and any obvious defects in the equipment (includes any damage caused by the impact).
- (3) Records where the parachute harness or component was cut. (Trained medical personnel dictate the method of removal of the parachute harness. The malfunction officer closely observes the cutting of the harness if required for removal of the parachutist.)
- (4) Takes immediate possession of the parachute log record. Limits access to this document to the appointed investigative officers.
- (5) Requests that medical personnel secure and preserve all clothing and equipment that is removed from the impact site with the parachutist.
- (6) Assumes responsibility for all air items and personal equipment to include the parachutist's weapon.
- (7) Takes statements from the preceding parachutist, the subsequent parachutists, jumpmasters, and any ground observers, and other parachutists or aircraft personnel able to provide significant facts.
- (8) Records the name and unit of any personnel who observed the incident even if they can provide no new facts to the investigation.
- (9) Secures a copy of the jump manifest and reconstructs the jump stick from personnel present, if required.
- (10) Conducts a detailed component-by-component examination of all equipment after the parachutist has been evacuated.

(11) Sketches the whole impact site in relation to the DZ and marks the impact location of the parachutist and equipment.

(12) Ensures the aircraft involved is notified as soon as possible. (This enables the aircrew to inspect, upon landing, for any defects or damage that may have contributed to or caused the malfunction.) Requests the segregation and identification of parachute deployment bags from those of other aircraft.

(13) Obtains the deployment bag serial number from the parachute log record. Retrieves and secures the deployment bag with the parachute assembly until he or she completes the investigation.

(14) Ensures the parachute(s) are loosely rolled, tagged, and bagged when he or she completes the onsite investigation. (He or she must not remove entanglements.)

(15) Ensures the evacuation of all equipment to an area where it is subjected to a technical rigger inspection according to TM 10-1670-201-23/TO 13C-1-41/NAVAIR 13-1-17.

(16) Returns to the parachutist's unit any organizational or personal clothing or weapons and equipment that belong to the parachutist that he or she feels reasonably sure were not the proximate cause of the malfunction.

e. In the event of an airdrop load malfunction, the malfunction officer:

(1) Moves to and secures the impact site as soon as possible.

(2) Determines if the load contained hazardous material, ammunition, explosives, or petroleum, oil and lubricant (POL). If any are found, he or she:

(a) Directs personnel in the vicinity of the load to evacuate the area (move back at least 500 meters).

(b) Request technical assistance required, such as qualified explosive ordnance disposal (EOD) or POL technicians.

(c) Derigs other airdrop loads in the danger area. Uses minimum essential personnel after a 30-minute cool-off period with approval of the EOD and POL technicians.

(3) Informs the DZ control party of the malfunction. If the malfunction occurs

during the extraction phase, requests notification of the aircraft so it can be inspected for damage.

(4) Conducts an onsite investigation of the malfunction according to this publication.

(5) Takes photographs of the load, damaged equipment, and impact site.

(6) Secures, identifies, and tags damaged air items and equipment.

(7) Returns air items and equipment to an appropriate area for a Technical/Rigger-type Inspection according to TM 10-1670-201-23/TO 13C-1-41/NAVAIR 13-1-17.

(8) Prepares and submits required reports according to chapter 5.

3-3. Malfunction Officer Investigations:

a. The depth of any investigation varies according to the severity of the malfunction and resultant injuries. In cases apparently not involving misconduct, serious injury, or death, the malfunction officer conducts the onsite investigation solely to determine the cause of the malfunction and actions required to prevent future occurrences.

b. In cases apparently involving misconduct, serious incident or injury, or death, conducts the follow-on investigation according to service directives. The malfunction officer's investigation notes, insights, reports, and physical evidence are made available to these investigations. The malfunction officer exercises great care so the government is not placed in an unfavorable position by compromising the rights of involved personnel. During the investigation, the malfunction officer gathers items of information and evidence that are sensitive in nature. He or she should take great care to ensure that any information pertaining to the investigation is given to authorized personnel on a need-to-know basis only.

3-4. Reporting the Malfunction. Use DD Form 1748-2 to report all airdrop malfunctions (see chapter 5). The malfunction officer selected to cover the airdrop operation completes this report.

Chapter 4

CONDUCT OF MALFUNCTION INVESTIGATIONS

4-1. General Guidance on Malfunction

Investigations. All airdrop malfunctions must be investigated and reported through the appropriate DOD component to the US Army Quartermaster School, Fort Lee, Virginia. The investigation must be conducted as expeditiously as possible after the malfunction or incident to preclude confusion of facts and the loss of data. In all cases, the malfunction officer who is on location at the time of the malfunction plays a key role in the overall investigation as a direct source of information. The malfunction officer provides his or her onsite and follow-on investigation reports to the investigating agency. The steps in the following paragraphs are a guide to follow in both the onsite and follow-on investigations. They are not all inclusive. a specific investigation can disclose other items that should be checked. Malfunction investigations may be conducted in two areas: personnel parachute malfunctions and airdrop load malfunctions.

4-2. Personnel Parachute Malfunction Investigations (Static Line and Free Fall):

a. Onsite Actions:

- (1) Prepare to photograph the malfunction as soon as observed.
- (2) Secure and guard the impact site.
- (3) Photograph the site.
- (4) Remove the parachutist from the harness. If possible, do not cut the harness and try not to disturb any medical evidence.
- (5) Sketch the impact site. Show equipment relationships and the exact location of the impact site on or in relation to the DZ.
- (6) Secure the names and units of any involved personnel and witnesses.
- (7) Examine equipment components by component.
- (8) Photograph any abnormal or unusual aspects of any component(s).
- (9) Gather and secure all clothing, equipment, air items, and personal property involved in the malfunction. Properly identify and tag items to include time, date, location, type of incident, name, and unit of person(s) involved. Maintain chain of custody for equipment.
- (10) Conduct a technical/rigger-type inspection in an appropriate area.
- (11) Release equipment not required for further investigations.
- (12) Complete all investigation reports.
- (13) Ensure retention of all air items and evidence until the investigating authority releases them.

b. Disposition of Air Items. All air items involved in a fatality must be secured until 90 days after completion of the investigation and upon submission of all reports this publication requires. At that time, supply documentation is prepared to drop these items from accountability. An unsigned certificate of destruction should be attached. This certificate should list the date, time, method of destruction, and witnesses to be present. You should allow 30 days for processing the supply documents before setting the destruction date. When the documentation is approved, the air items are destroyed on the preset destruction date. TM 10-1670-201-23/TO 13C-1-41/NAVAIR 13-1-17 states the items should be burned. After the destruction is completed, the designated destruction officer signs the certificate of destruction and furnishes copies to the appropriate supply activities and to the investigation file. The hand receipt holder will be the destruction officer.

c. Main Parachute (Static Line Deployed):

- (1) Compare the log record with the canopy and deployment bag serial numbers.
- (2) Check the condition of the harness, to include the quick-release assembly or quick-fit ejector snaps and canopy release assemblies for proper operation.
- (3) Check the method and sequence of the attachment of items of equipment on the main lift web D-rings.
- (4) Check the condition of the riser, to include the steering line guides and toggles on the steerable parachute.
- (5) Check the parachute connector links for missing or loose screws.
- (6) Check all suspension and steering lines for breaks, frays, or burn areas.
- (7) Check the anti-inversion net for damage.
- (8) Check the main canopy gores for holes, tears, broken stitches, or burn areas.
- (9) Check the bridle loop for tears, burns, or broken stitches.
- (10) Check the condition of the deployment bag, to include the static line and snap hook.

d. Reserve Parachute:

- (1) Not Activated:
 - (a) Check the parachute log record and compare it with the canopy serial number (after the reserve is activated).
 - (b) Check the butterfly snap fasteners for proper operation.
 - (c) Check the pack for holes or tears.
 - (d) Check the pack opening spring bands for proper routing and condition.

(e) Check the cones and grommets for damage.

(f) Check the ripcord for the steel swage ball on the end of the cable and straightness of the pins.

(g) Check the ripcord pocket for debris.

(h) Activate the reserve parachute.

Conduct the ripcord pull and ripcord test according to TM 10-1670-201-23/TO 13C-1-41/NAVAIR 13-1-17.

(2) Activated:

(a) Check the parachute log record and compare it with the canopy serial number.

(b) Check the butterfly snap fasteners for damage and proper operation.

(c) Check the pack tray for holes or damage.

(d) Check the pack opening spring bands for proper routing and condition.

(e) Check the ripcord pocket, cones, and grommets for damage.

(f) Check the suspension lines for breaks, frays, or burn areas.

(g) Check the canopy for holes, tears, or burned areas.

(h) Check the pilot parachute for proper attachment.

(i) Check the pilot parachute for twisted suspension lines, holes, tears, or burn areas on the canopy.

e. Individual Equipment:

(1) M-1950 Weapons Container:

(a) Check to see if the quick-release snap has been properly installed.

(b) Check to see if the lowering line (if used) has been properly installed and stowed.

(c) Verify that bag length is between 33 1/2 and 50 1/2 inches.

(d) Check to see if the leg strap has been tied or cut.

(2) Aviator Kit Bag and H-Harness:

(a) Verify that the H-harness and attaching straps were properly installed.

(b) Verify that the lowering line was provided and properly installed if the weight exceeds 35 pounds.

(3) Container, Weapons, and Individual Equipment:

(a) Check to see if the bag and the lowering strap were properly rigged and installed.

(b) Check to see if the leg strap was secured or cut.

(c) Check the push-pull actuator assembly to ensure it functions properly.

(d) Verify that the aviator kit bag is not heavier than 95 pounds.

(e) Verify that the aviator kit bag is not rigged oversize (greater than 12 inches by 12 inches by 42 inches).

(4) Dragon Missile Jump Pack:

(a) Check to see if the missile and individual weapon are properly rigged in or on the pack.

(b) Check the hook and pile lowering line. Verify that the attaching adaptor was properly rigged on the parachutist.

(c) Verify whether the leg straps were secured or cut.

(d) Inquire whether the parachutist was within height limitations and if he or she had experience in jumping the Dragon Missile Jump Pack.

(5) Flotation Devices (Life Preservers):

(a) Verify whether they were properly worn.

(b) Check for proper functioning.

(c) Check whether there was corrosion or worn areas on the carbon dioxide (CO₂) inflation valve or if the activator cord was unserviceable.

(6) Combat Equipment. Check to verify whether the equipment was worn exposed and if it was worn according to FM 55-220/TO 14D1-2-2 and TC 57-1.

f. Harness Assembly (Free Fall):

(1) Check the condition and setting of the automatic opening device to include routing of the power cable housing.

(2) Check the condition of the harness, to include the quick-ejector snaps and the canopy release and ripcord assemblies.

(3) Check the condition of the pack tray and pack opening spring bands.

(4) Check the condition of the oxygen system, to include the mask, hose, connector, and oxygen bottle. Secure the oxygen bottle for a determination of the remaining air.

(5) Check the type of equipment attached to the harness D-rings.

g. Main Canopy (Free Fall):

(1) Check the parachute log record and compare it with the canopy serial number.

(2) Check the ripcord assembly if the canopy did not activate. Verify proper routing and installation, to include condition of pins and cones (soft or hard).

(3) Check the risers if the canopy was activated. This check should include canopy release assemblies and steering toggles and guides. If a Ram-Air canopy was used, check the proper setting of the brakes.

(4) Check the parachute connector links for proper installation or loose or missing components.

(5) Check all suspension and steering lines for breaks, frays, or burn areas.

(6) Check the condition of the reefing system on Ram-Air canopies.

(7) Check the main canopy for holes, tears,

broken stitching or burn areas.

(8) Check the condition of the stabilizer panels.

(9) Check the condition of the retainer line, bridie line, deployment bag or sleeve, and pilot parachute.

h. Reserve (Free Fall):

(1) Check and compare the parachute log record with the canopy serial number.

(2) Check for proper installation or attachment to the main harness.

(3) Check the ripcord assembly if the canopy did not activate. Verify proper routing and installation, to include the condition of the pins and cones (soft or hard).

(4) Check the condition of risers if the canopy did activate. Inspect the steering line guides and toggles, if applicable.

(5) Check the proper brake setting on Ram-Air canopies.

(6) Check the parachute connector links for proper installation and missing components.

(7) Check all suspension and steering lines for breaks, frays, or burn areas.

(8) Check the condition of the reefing system on Ram-Air canopies.

(9) Check the condition of stabilizer panels on Ram-Air canopies.

(10) Check the canopy for holes, tears, broken stitching, or burn areas.

(11) Check the condition of the bridle line and pilot parachute.

(12) Check the condition of the deployment bag or rapier, if required.

i. Parachutist Activities:

(1) What was parachutist's mental attitude in the aircraft? Was he or she relaxed or tense? Were his or her activities sure and coordinated?

(2) Were all jumpmaster commands performed in a sure and positive manner?

(3) Was the equipment properly secured to the parachutist during his or her exit?

(4) Did the parachutist make a satisfactory exit?

(5) Was the parachutist stable and in control (free fall)?

(6) How did the parachutist react to the malfunction?

4-3. Airdrop Load Malfunction

Investigations:

a. Categorize the malfunctions by the phase in which they occur. To restrict the investigations to factors that could have caused or contributed to the malfunctions saves time and effort. Observation of the incident can normally determine the phase of the occurrence.

(1) Extraction Phase. The period of time that begins with the activation of the aerial delivery system and continues until the extraction force transfers to recovery parachute deployment.

(2) Deployment Recovery Phase. The period of time that begins with the transfer of force from extraction to recovery parachute deployment and continues until load impact.

(3) Release Phase. This phase necessarily overlaps the Deployment Recovery Phase, but concerns only the functioning of the release assembly. It commences when the time delay cartridge or timer mechanism should actuate and continues until load impact when the parachute release should occur.

b. Check these steps during the low-velocity airdrop malfunction investigation:

(1) Extraction Phase:

(a) Failure of the Extraction Parachute to Deploy or Inflate:

1. Did the aircraft extraction parachute release mechanism function properly?

2. Were bag closing ties correctly made and pendulum lines properly installed?

3. Was the parachute safety loop free from the bent V-ring?

4. Was the reefing line properly installed, if used?

(b) Failure or Delay in the Load Extraction:

1. Did the extraction parachute appear to fully develop?

2. Was positive aft restraint removed?

3. Was the correct number of detents and restraints settings used for the load?

4. Was the correct extraction line used and connected?

5. Was the platform damaged? (Answer only when a load did not exit.)

(c) Failure to Transfer the Extraction Force to Deployment:

1. Static Line or Connector Strap Extraction Systems:

a. Was the static line properly rigged and connected to the anchor cable?

b. Was the connector strap the correct length and routed through the knives of static lines?

c. Was the connector strap routed through the type IV link correctly?

d. Was the connector strap cut?

2. Platform Extraction Force Transfer Coupling (PEFTC) and Extraction Force Transfer Coupling (EFTC) Extraction Systems:

a. Were actuator(s) installed in the correct platform rail position (check the arm and foot to indent clearance)?

b. Were actuator arm safety pin(s) removed and correctly stowed?

c. Was the extraction bridle correctly routed through the three-point link (PEFTC)?

d. Was the release cable secured or attached to the actuator and latch assembly with cable clevis pins installed (EFTC)?

e. Was the release cable the correct length and properly routed (EFTC)?

(2) Deployment-Recovery Phase:

(a) Failure of Recovery Parachutes to Deploy:

1. Was the deployment line attached to the extraction system and the parachutes?

2. Was the deployment line misrouted?

3. Were the parachute restraint and release straps properly attached?

4. What was the condition of the release knives?

(b) Failure of the Suspension system:

1. Did the load suspension points fail?

2. Did the suspension slings or attaching hardware fail?

3. Were the correct slings used?

4. Were the slings correctly attached to the parachute release and the load or platform?

5. Were slings correctly routed to the suspension points?

6. Was protective padding used where it was needed?

(c) Failure of Recovery Parachute(s) to Fully Inflate:

1. were reefing line cutters armed and cotter pins removed?

2. Did the cutters fire?

3. Was the reefing line the proper length and cut?

4. Was the reefing line entangled in the reefing rings or suspension lines?

5. Were the canopy, suspension lines, and connector link ties correctly made?

(3) Release Phase:

(a) Midair Release:

1. At what point did the midair separation occur?

2. Did the midair separation occur at the release assembly or at the type IV link that joins the riser extensions?

3. Did the release actuate prior to the load stabilizing?

4. Was the release(s) attached to the parachute(s) and the load?

5. Was the release(s) properly rigged?

6. Was the release(s) checked for a faulty release pin or weak spinner spring (5,000-pound release)?

7. Was the timer serviceable when tested after the drop? What deficiencies were noted (specify M-1 or M-2 release)?

(b) Failure to Disconnect:

1. For 5,000-Pound Parachute Releases:

a. Did a no-load condition occur on impact?

b. Was the spinner still seated?

c. Was the safety pin removed from the delay assembly?

d. Was a cartridge present in the firing mechanism housing?

e. Did the cartridge fire?

2. For M-1 and M-2 Parachute Releases:

a. Did a no-load condition occur on impact?

b. Did the release upper-suspension link rotate to the release position?

c. Was the arming wire pulled from the timer?

d. Did the timer keys retract and the timer fall in the guide block?

e. Was the timer serviceable when it was tested after the drop?

f. Were the release components damaged?

c. Check these steps during the low-altitude parachute extraction malfunction investigations:

(1) Failure of the Drogue Parachute To Deploy or Inflate:

(a) Did the aircraft extraction parachute release mechanism function properly?

(b) Were the bag closing ties correctly made?

(c) Was the safety loop free from the bent V-ring and was the pendulum line properly installed?

(d) Did the drogue separate prematurely from the aircraft tow plate?

(2) Failure of the Main Extraction Parachute To Deploy or Inflate:

(a) Did force transfer occur?

(b) Did the drogue separate prematurely from the extraction parachutes?

(c) Did the extraction parachutes contact the ground?

(d) Did the canopies deploy prematurely?

(e) Was the aircraft dual-rail system operational?

d. Check these steps during the container delivery system malfunction investigation:

(1) Failure of the Containers to Exit the Aircraft:

(a) Was the release gate properly rigged? Was the knife sharp and attached?

(b) Did the aircraft release system function properly?

(c) What was the condition of the rollers and skid board if the container(s) were jammed in the aircraft?

(2) Failure of the Recovery
Parachutes to Deploy and Inflate:

(a) Were the parachute static lines attached to the anchor cables and were the anchor cable stops installed at the prescribed location?

(b) Were the parachutes attached to the containers?

(c) were the pilot chutes attached to the cargo parachutes?

(d) Were the bag closing ties made with prescribed materials?

(e) Were the canopy and suspension line ties properly installed with prescribed material?

e. Check these steps during the ramp bundle airdrop system (WEDGE) malfunction investigation:

(1) Failure of Bundles to Exit Aircraft:

(a) Were bundles the correct size?

(b) Were positive aft restraint straps removed?

(c) Were bundle release pins pulled?

(d) Was the ramp bundle airdrop system damaged during the loading?

(2) Failure of Parachutes to Deploy and Inflate:

(a) Were anchor cable stops installed at the prescribed location?

(b) Were nonbreakaway static lines used and attached to the inboard anchor cables?

(c) Did the bundles tumble excessively?

(d) Were parachutes attached to the bundles?

(e) Were bag closing ties made with prescribed materials?

Chapter 5

REPORTING MALFUNCTIONS OR DAMAGES

Section A-General Report Requirements

5-1. Command Channel Report. Immediately report all malfunctions or damages to airdropped equipment through the command channels of the owning unit.

5-2. Quality Deficiency Report. The airdrop support unit commander that provides the air items that malfunction prepares a Standard Form 368, Quality Deficiency Report (Category II), if he or she determines the equipment requires improvement.

5-3. Electronic or Telephone Reports. If serious injury or death results from a malfunction, an electronic message must be sent to the Commandant, US Army Quartermaster School, Attention: ATSM-ABN, Fort Lee, VA 23801. The message must be sent within 12 hours of the malfunction. If electronic message capability is not available, dial AUTOVON 687-3800 or (804) 734-3800 (Commercial) to make a telephonic report. Sufficient facts, insights, and tentative ideas on the cause and mechanics of the malfunction must be included in the report so the Commander, US Army Quartermaster Center, can request grounding of the affected equipment, if required.

5-4. Lost Time Report. Preparation of a service-peculiar injury or lost time report is the parachutist's parent unit responsibility. Upon request, the malfunction officer will provide information for the word picture of the accident.

Section B-DD Form 1748-2, Airdrop Malfunction Report (Personnel- Cargo)

5-5. Malfunction Reporting Procedures. All DOD components, including the smallest element involved in the airdrop of personnel, supplies, and equipment, must report all malfunctions of personnel parachutes and airdrop loads rigged by their assigned units and dropped or extracted from aircraft. A DD Form 1748-2 is used for this purpose. Completion instructions are printed on the form. NOTE: DD Form 1748-2 is not required for each personnel parachute malfunction when precluded by operational conditions of mass tactical airborne exercises. Under these conditions, the reporting element accurately accounts for all personnel parachute malfunctions that occur. As a minimum, they will include the type of aircraft, type of parachute involved, and malfunction in the "Remarks Section" of DD Form 1748-3, for the period in which the malfunctions occurred. The name and date of

the exercise must be included. This exception does not apply to malfunctions that result in serious injury or a fatality.

5-6. Disposition Instructions:

a. One copy of the completed reports should be forwarded through appropriate channels to the Commandant, US Army Quartermaster School, Attention: Airborne Department, Fort Lee, VA 23801. Reports must be submitted within 5 workdays after the malfunction occurs.

b. If a fatality occurs as a result of a malfunction, one copy of the final investigation report and DD Form 1748-2 must be forwarded to the address in above, within 10 calendar days after completion of the investigation. This copy is in addition to the requirements in paragraph 5-3.

c. DD Form 1748 series inspection forms must accompany each DD Form 1748-2 for each airdrop load malfunction.

Section C-DD Form 1748-3, Joint Monthly Airdrop Summary Report

5-7. Reporting Procedures. All DOD components, including the smallest element involved in the airdrop of personnel, supplies, and equipment, must report all monthly airdrop activities their assigned units conduct. Completion instructions are printed on the form. Reports of subordinate units should be consolidated before submission.

5-8. Disposition Instructions. One copy of the completed reports should be forwarded through appropriate channels to the Commandant, US Army Quartermaster School, Attention: Airborne Department, Fort Lee, VA 23801. Reports must be submitted by the tenth day of the following month. NEGATIVE reports are required.

Section D-Annual Airdrop Roster

5-9. Reporting Procedures. All primary branches of service must prepare a roster of subordinate units involved in premeditated airdrop operations. This roster may be in letter form.

5-10. Disposition instructions. One copy of the completed roster should be forwarded to the Commandant, US Army Quartermaster School, Attention: Airborne Department, Fort Lee, VA 23801. The roster must be submitted by 10 January of each calendar year.

Chapter 6

PRIMARY SERVICE RESPONSIBILITIES AND INTEREST

6-1. Air Force. The Deputy Chief of Staff, Plans and Operations (HQ USAF/XOOTA), Wash DC 20330, is the office of primary responsibility for this joint publication. An AF Form 847, Recommendation for Change of Publication, should be used to submit recommendations for improvement or revision.

6-2. Army. The Office of the Deputy Chief of Staff for Research, Development, and Acquisition (HQDA (DAMA-WSA)), Wash DC 20310, is the office of primary interest for the Army. A DA Form 2028, Recommended Changes to Publications and Blank Forms, is used to submit recommendations for improvement or revision.

6-3. Navy. The Deputy Chief of Naval Operations (OPNAV 414), Wash DC 20350, is the office of primary interest for the Navy. Forms will be provided by OP 414 upon written request. Recommendations for improvement or revision should be submitted to the Chief of Naval Operations (OPNAV-414), Wash DC 20350.

6-4. Marine Corps. The Deputy Chief of Staff for Aviation, Wash DC 20380, is the office of primary interest for the Marine Corps. Recommendations for improvement or revision should be sent to Headquarters Marine Corps (Code APW), Wash DC 20380.

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SUMMARY OF CHANGES

This revision has been completely rewritten. It defines special terms and prescribes malfunction officer duties and responsibilities (para 3-2); lists detailed procedures for malfunction investigations and reports (chapters 3, 4, and 5); gives instructions for using new and revised forms and amplifies instructions for completing DD Forms 1748-2 and 1748-3 (chapter 2); and implements and provides instructions for completing DD Form 1748-4 (chapter 2).

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